GPS Steering System
Installation Manual

Supported Vehicles

Challenger	Massey Ferguson	AGCO
MT-645C	MF-8650	DT-205B
MT-655C	MF-8660	DT-225B
MT-665C	MF-8670	DT-250B
MT-675C	MF-8680	DT-275B

All Autoguide^2 Ready vehicles with Factory
CAN Steering Valve and Wheel Angle Sensor

PN: 602-0234-01-A

LEGAL DISCLAIMER

Note: Read and follow ALL instructions in this manual carefully before installing or operating the AutoSteer system.

Note: Take careful note of the information in the Safety Information section and throughout this manual.

The manufacturer disclaims any liability for damage or injury that results from failure to follow the instructions and warnings set forth herein.

Please take special note of the following warnings:

1. There is NO obstacle avoidance system included in the manufacturer's product. Therefore, users must always have an operator on the equipment when the AutoSteer system is in use to look for any obstacles including people, animals, trees, ditches, buildings, etc.
2. During installation of the AutoSteer system and during the Calibration and Tuning processes the vehicle steering system can move the vehicle and turn the front wheels. Be sure that all people and obstacles are clear of the vehicle on all sides before engine startup, calibration, tuning or use of the AutoSteer system.
3. Use of the AutoSteer system is NOT permitted while equipment is on roads or in public areas. Follow the instructions set forth below for ensuring that the system is OFF before driving on roads or in public areas.

Special Requirements

Tools

This list consists of the tools required to complete the installation. The installer is assumed to have a complete set of common installation tools.

10mm socket and ratchet	3/8" wrench	Multimeter (voltmeter)
13mm socket and ratchet	7/16" wrench	Ladder, 10 ft (3m)
16mm socket and ratchet	1/2" wrench	Wire cutters
17mm socket and ratchet	15/16” wrench	Tape measure 12 ft (3.7m) minimum
24mm socket and ratchet	24mm wrench	Cleaning rags
#1 Phillips screwdriver	Automotive grease	Cleaning brush
#2 Phillips screwdriver	Epoxy adhesive	

Safety Information

Warning Alerts

The AutoSteer system installer and manufacturer disclaim any responsibility for damage or physical harm caused by failure to adhere to the following safety requirements:

- As the operator of the vehicle, you are responsible for its safe operation.
- The AutoSteer system is *not* designed to replace the vehicle's operator.

Note: Verify that all screws, bolts, nuts, hose connections and cable connections are tight after the final installation of the AutoSteer system.

⚠ WARNING

To avoid electrical shock hazards, remove the Roof Module from the vehicle before driving under low structures or low electrical power lines.

⚠ WARNING

To prevent injury from falling, ensure you are in a stable position on the vehicle when installing or removing the Roof Rail and Roof Module. If the vehicle does not provide a safe platform, use a ladder to safely access the vehicle roof while installing or removing the Roof Rail and Roof Module.

⚠ WARNING

To prevent accidental death or injury from being run over by the vehicle. Ensure all sides of the vehicle are clear of people and obstacles before startup, calibration, tuning or use of the AutoSteer system.

⚠ WARNING

To understand the potential hazards associated with the operation of the AutoSteer system equipment read the provided documentation before installing the AutoSteer system on a vehicle.

⚠ WARNING

To prevent the accidental engagement of the AutoSteer system and loss of vehicle control while driving on roads, shut down the AutoSteer display (exit the program) and turn off the AutoSteer main switch on the tractor console. Never drive on roads or in public areas with the AutoSteer system turned on.

Caution Alerts

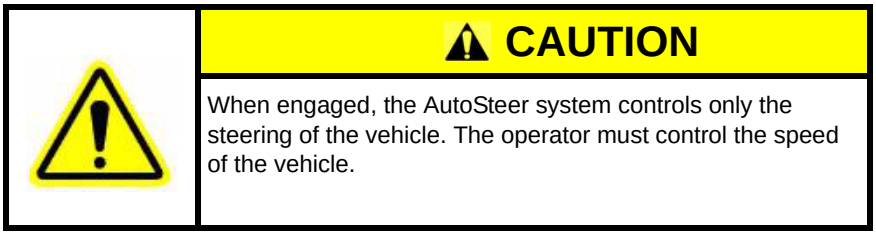
The AutoSteer system installer and manufacturer disclaim any responsibility for damage or physical harm caused by failure to adhere to the following safety requirements:

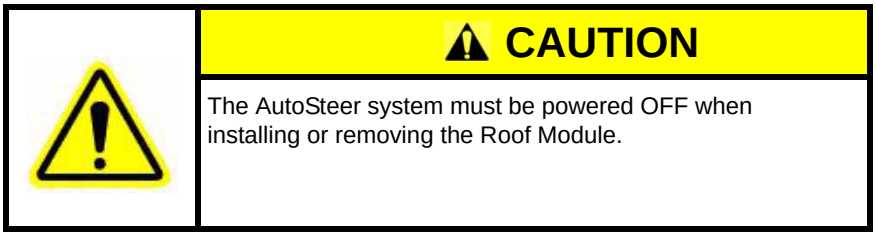
⚠ CAUTION

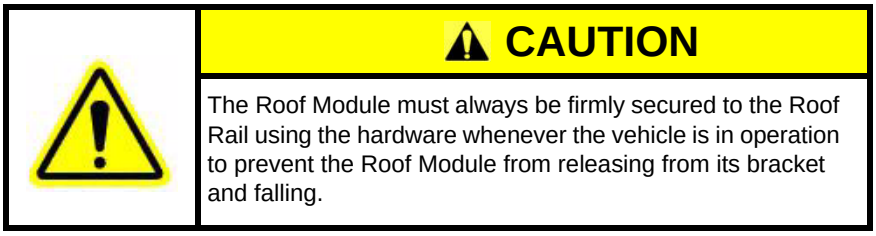
The Roof Module must be removed when transporting or driving the vehicle at speeds above 30 mph (50 km/h). The Roof Module can possibly detach due to wind loads at higher speeds.

⚠ CAUTION

The AutoSteer system does not detect obstacles in the vehicle's path. The operator must observe the path being driven in order to avoid obstacles.


CAUTION
When engaged, the AutoSteer system controls only the steering of the vehicle. The operator must control the speed of the vehicle.




CAUTION
The Roof Module must always be firmly secured to the Roof Rail using the hardware whenever the vehicle is in operation to prevent the Roof Module from releasing from its bracket and falling.

Vehicle Requirements

The tractor must be one of the AGCO models listed on this manual's front cover and must be fully AutoGuide^2 ready with the factory Steering Valve, Wheel Angle Sensor, roof-top connector and wiring harness. Contact your AGCO dealer as necessary to confirm the vehicle and Steering Valve are AutoSteer-2 Ready. Some vehicles require a firmware upgrade and a Steering Valve or Wheel Angle Sensor calibration to fully enable the AutoSteer functionality. The firmware upgrade and calibration must be performed by an authorized AGCO dealer using a factory service tool.

The steering system must be in good working order before installing AutoSteer. Drive the vehicle and confirm it steers straight and is responsive. The electrical system and battery must be in good working order. The roof and cab electrical connectors must not be damaged and in good working order. To improve the overall installation and cable routing, clean the cab and cab roof before starting the installation. Check for loose or worn parts.

Important Information

This installation manual contains valuable information for servicing the AutoSteer system. After the installation is complete, store this manual in a safe place for future reference.

Note: Verify that all screws, bolts, nuts and cable connections are tight after the AutoSteer system final installation.

Technical Support

Refer to your owner's manual for technical support information.

Contact Information

Refer to your owner's manual for contact information.

AutoGuide^2 is a trademark of AGCO Corporation.

Copyright © 2010 All Rights Reserved.

Table of Contents

Chapter 1 **Installation Overview** **1**
- Kit Overview 2
- Pre-Installation Vehicle Hardware and Software Verification 3
- Pre-Installation Vehicle Tests 4
- Installation Procedure Outline 5
- Cable Diagram 6

Chapter 2 **Roof Module Installation** **7**
- Safety Notes 7
- Challenger MT-600C Installation Procedure 9
- Massey Ferguson MF-8600 and AGCO DT-200B Installation Procedure 15

Chapter 3 **Display Installation** **23**

Chapter 4 **Connecting System Cables** **25**
- Roof Module Connection 25
- Roof Module Serial Communication Connection 32
- Power Supply Connection 36
  - Cab Power Connection 37
  - Battery Power Connection 38

Chapter 5 **Post-Installation Procedures and Information** **41**
- Create a New Vehicle 41
- Verify the Vehicle is Ready for AutoSteer 42
- Calibration and Tuning Notes 43
  - Vehicle Specific Installation Calibration and Tuning Guidelines 43

Chapter 6 **Final Hardware Installation Checklist** **45**

Installation Overview

This **Installation Overview** chapter contains part numbers, kit overview diagram, cabling diagram and the installation procedure.

- *Kit Overview*
- *Pre-Installation Vehicle Hardware and Software Verification*
- *Pre-Installation Vehicle Tests*
- *Installation Procedure Outline*
- *Cable Diagram*

This installation guide describes the installation of the AutoSteer system on several models of Challenger, Massey Ferguson and AGCO series vehicles. The AutoSteer installation kit PN: 188-0025-01 supports the AGCO Autoguide^2 models listed on the front cover.

Kit Overview

The Installation Kit (PN 188-0025-01) contains the components shown in *Figure 1-1*.

Figure 1-1 AGCO MT-600C AutoGuide^2 Kit Components (PN: 188-0025-01)

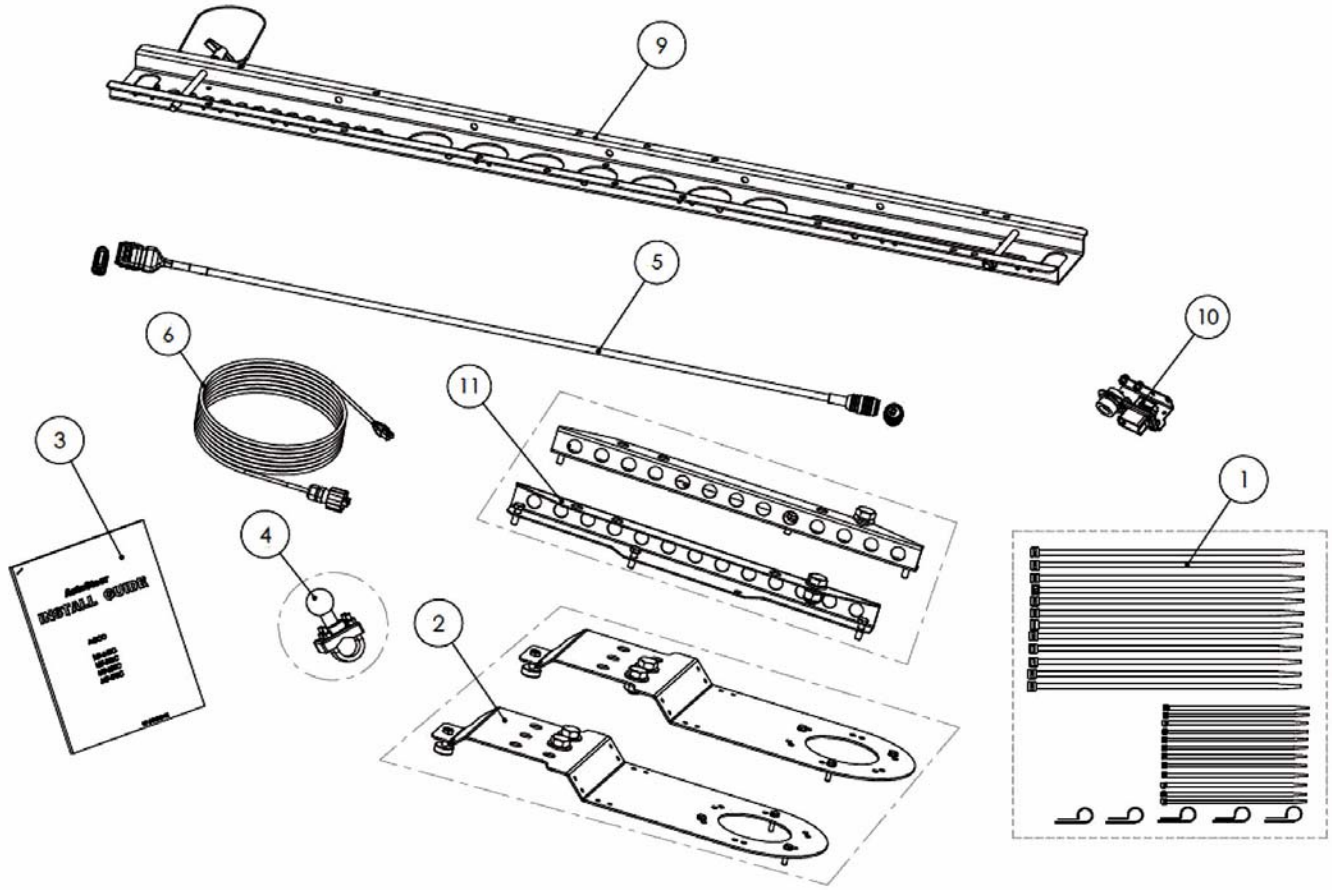


Table 1-1 Installation Kit Components

Item	Component	Part Number
1.	Cable Routing Hardware	200-0121-01
2.	Roof Module Bracket	200-0525-01
3.	Installation Manual	602-0234-01
4.	Display RAM Mount Assembly	207-0010-01
5.	AutoGuide^2 Harness	201-0479-01
6.	Ethernet Cable	201-0497-01
9.	Roof Rail	200-0515-01
10.	Blanking Connectors	200-0520-01

Item	Component	Part Number
11.	Roof Module Brackets	200-0583-01

Pre-Installation Vehicle Hardware and Software Verification

Before beginning the AutoSteer installation, you must verify your vehicle has the appropriate hardware and software installed.

1. Verify that the AutoGuide^2 connector is present on the cab roof front left corner. See *Figure 1-2*.

Note: This connector is used for connecting your ParaDyme Roof Module for vehicle power and the CAN interface.

Figure 1-2 Accuguide^2 Connector on Roof

2. Confirm the vehicle has the correct Steering Valve firmware installed and fully supports AutoGuide^2.

Note: If you are uncertain about your firmware version, contact your AGCO dealer.

Pre-Installation Vehicle Tests

The vehicle steering system must be in good working condition prior to AutoSteer System installation. Verify the existing steering system is operating correctly by performing the tests listed below.

Note: The AutoSteer system test requires a relatively large area for vehicle movement. Ensure you have enough room to perform the test before beginning.

1. Drive the vehicle in a low gear and slowly turn the steering wheel full left. The vehicle should steer to the left at a steadily increasing rate until it is making a sharp left turn.
2. Drive the vehicle in a low gear and slowly turn the steering wheel full right. The vehicle should steer to the right at a steadily increasing rate until it is making a sharp right turn.

   Note: The change in steering speed and angle should also be proportionally opposite to what was noticed when turning the vehicle to the left. The vehicle should react at the same speed and turn at the same angle when the steering wheel is turned the same angle either left or right.

3. Drive the vehicle in a straight line on flat terrain in a low gear and release the steering wheel.

   Note: The vehicle should continue to drive straight after releasing the wheel without drifting right or left.

4. Ask the vehicle driver or owner if they have experienced any vehicle steering problems. The operator should report no steering problems.

   Note: If the vehicle passes the four tests, proceed with the AutoSteer system installation.

   Note: If the vehicle fails one or more of the tests, the steering system must be evaluated by an AGCO dealer and repaired if necessary.

Installation Procedure Outline

Note: The system interconnect cable diagram in the *Cable Diagram* on page 6 section of this chapter shows the AutoSteer system electrical connections and should be used as a reference during the installation process.

When installing and electric steering actuator such as OnTrac2, skip *Step 2.* and *Step 6.* and follow the supplementary instructions provided with your electric steering unit.

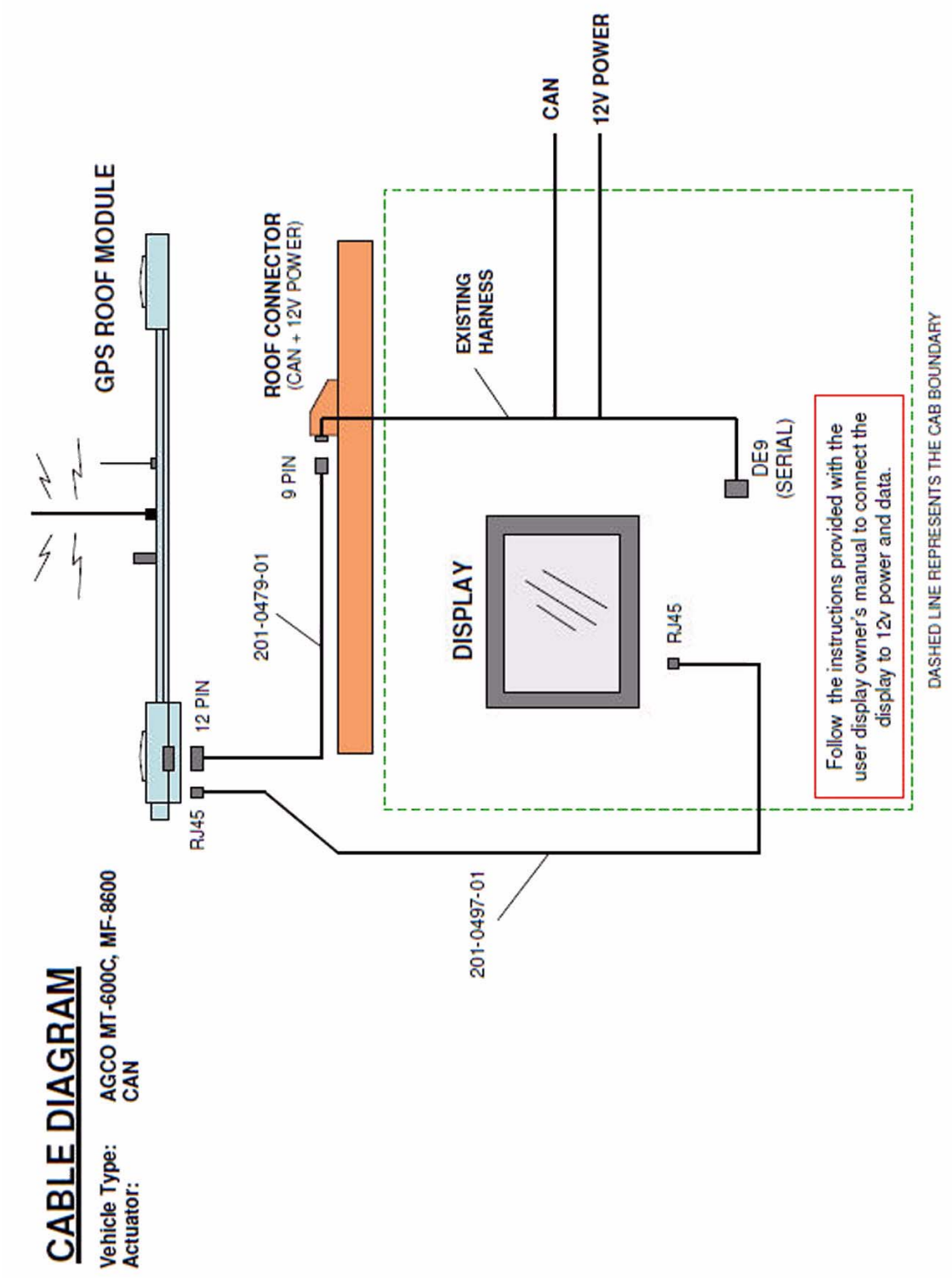
1. Verify the components received match the shipping documentation.
2. Verify the vehicle has the proper factory software and hardware installed for AutoGuide^2.
3. Install the Roof Rail and Roof Module
4. Install the Display mounting bracket.
5. Install the Display using the RAM Mount Arm.
6. Connect the roof CAN harness.
7. Connect the Ethernet cable. (when required)
8. Connect the power and Display cables.

Note: Instructions for connecting the Display electrical connections are found in the Display User Manual.

9. Ensure all connectors and cables are properly coupled secured with cable ties.
10. Power ON the AutoSteer system.
11. Calibrate the AutoSteer system.
12. Tune the AutoSteer system.
13. Verify the AutoSteer system has been properly installed and operates satisfactorily.

Note: An optional Wheel Angle Sensor is not offered for this installation. The AutoSteer system always uses the factory provided front axle Wheel Angle Sensor.

Cable Diagram



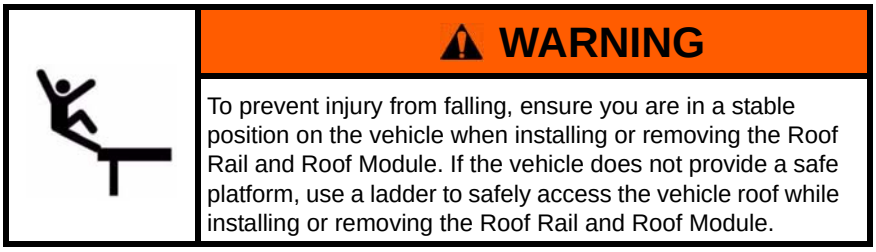
Roof Module Installation

This **Roof Module Installation** chapter contains information in the following sections:

- *Safety Notes*
- *Challenger MT-600C Installation Procedure*
- *Massey Ferguson MF-8600 and AGCO DT-200B Installation Procedure*

Safety Notes

- The AutoSteer system must be powered OFF when installing or removing the Roof Module.
- The Roof Module must be removed when transporting the vehicle at speeds above 30 mph/50 kph.
- The Roof Module must always be firmly secured to the Roof Rail using the hardware provided whenever the vehicle is in operation to prevent the Roof Module from releasing from its bracket and falling.
- Ensure you are in a stable position on the vehicle platform when removing the Roof Module, to ensure you do not fall or drop the Roof Module.


WARNING
To prevent injury from falling, ensure you are in a stable position on the vehicle when installing or removing the Roof Rail and Roof Module. If the vehicle does not provide a safe platform, use a ladder to safely access the vehicle roof while installing or removing the Roof Rail and Roof Module.

There are two styles of cab roof mounts depending on the tractor model. The Challenger MT-600C series has a roof style as shown in *Figure 2-1* with two light mounts and no hatches or covers. The Massey Ferguson MF-8600 series and AGCO DT-200B series have the roof style shown in *Figure 2-2* with a maintenance cover.

Figure 2-1 Challenger MT-600C Rooftop

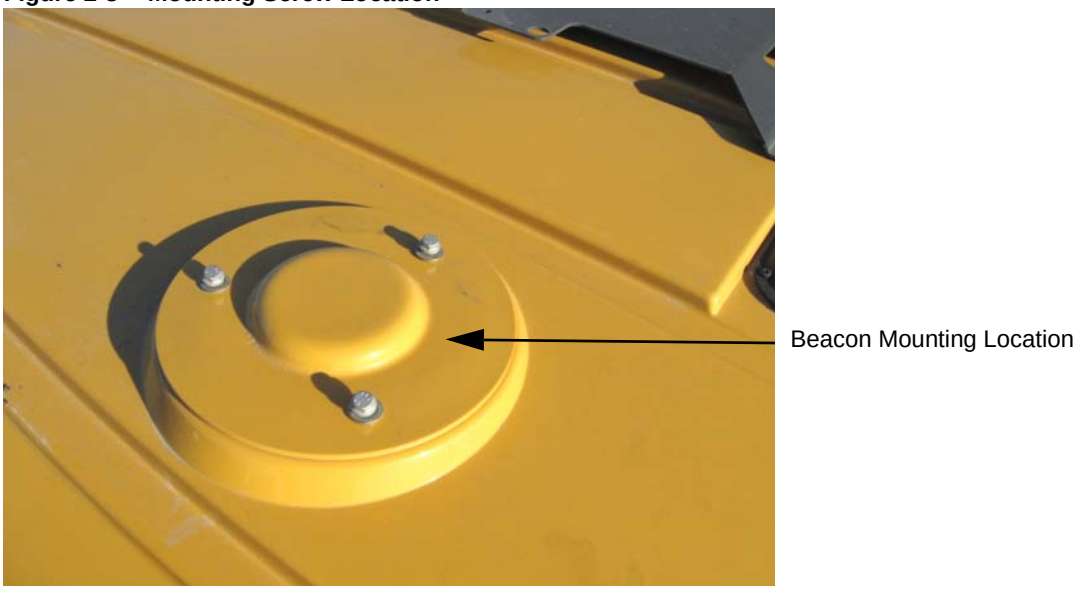
Figure 2-2 Massey Ferguson MF-8600 and AGCO DT-200B Rooftops

Challenger MT-600C Installation Procedure

1. Locate the two beacon mounting plates on top of the cab. The left beacon mounting plate is shown in *Figure 2-3*.

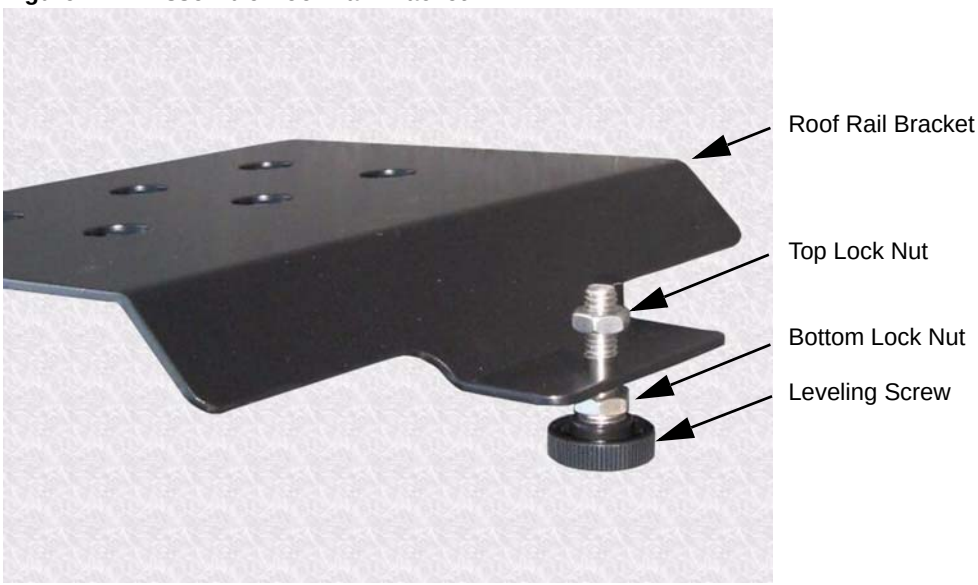
Note: If the beacons are installed on the vehicle, the same kit will work. Follow the instructions provided except ensure the beacons are reattached after bracket installation.

Figure 2-3 Mounting Screw Location



2. Remove the three hex bolts holding the cap with a 10mm socket and ratchet.
3. Assemble both of the Roof Rail brackets as shown in *Figure 2-4*.
4. Attach an 8mm nut to the rear leveling screw.
5. Turn the leveling screw into the threaded hole at the bracket rear.
6. Attach another 8mm nut to the screw opposite side.

Figure 2-4 Assemble Roof Rail Bracket

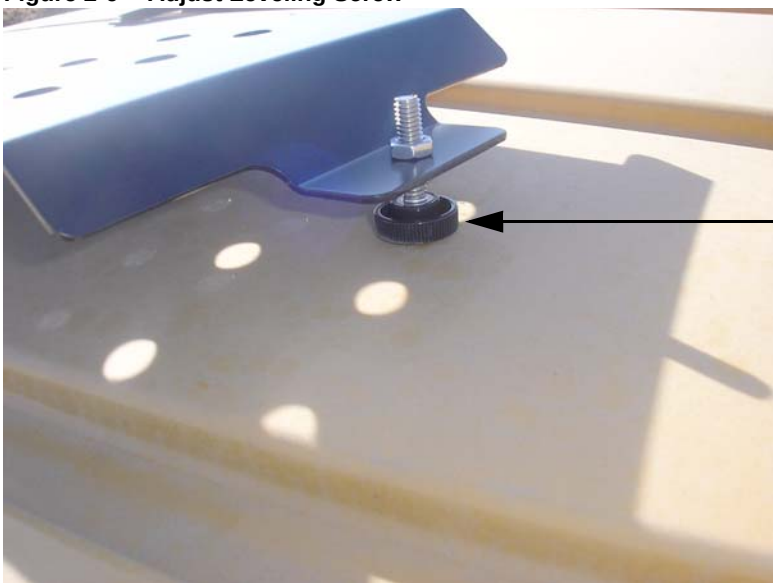


7. Attach the Roof Rail bracket to the roof using the new longer kit provided M6 x 25mm bolts with the Roof Rail mounting holes facing the vehicle front. See *Figure 2-5*.
8. Tighten the bolts with a 10mm socket and ratchet.

Figure 2-5 Attach the Roof Rail Mounting Bracket (Left Side Shown)

9. Repeat the above process and attach the other Roof Rail mounting bracket on the cab right side.
10. Adjust the rear bracket leveling screw so it holds the Roof Rail bracket parallel to the ground while compressing against the roof slightly, as shown in *Figure 2-6*.
11. Tighten the two lock nuts with two 13mm wrenches.

Figure 2-6 Adjust Leveling Screw



12. Place the Roof Rail on top of the Roof Rail mounting brackets and center it over the cab.

Note: Ensure the Roof Rail Quick Release Pin is on the vehicle left side.

---

13. Confirm the Roof Rail is mounted perpendicular to the cab roof using the same bracket holes on the right and left brackets.

14. Attach the Roof Rail using the kit provided 5/8” x 1” bolts, washers and nuts. See *Figure 2-7*.

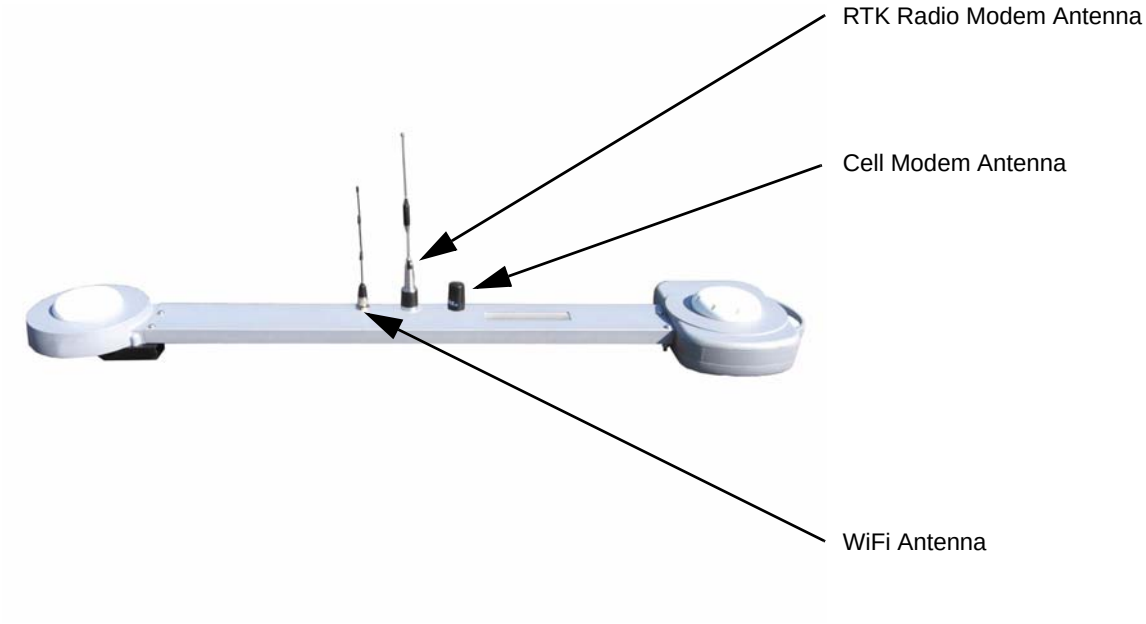
15. Tighten the bolts with a 15/16” wrench and 15/16” socket and ratchet.

Figure 2-7 Attach Roof Rail

16. Attach the three antennas to the proper Roof Module connections. See *Figure 2-8*.

Note: Hand tighten the connections. Do not over tighten.

Figure 2-8 Antennas Attached to Roof Module



17. Remove the Roof Rail locking pin. See *Figure 2-9*.

Figure 2-9 Removing the Locking Pin

18. Place the Roof Module on the Roof Rail

19. Re-insert the locking pin to lock the Roof Module onto the vehicle. See *Figure 2-10*.

Note: The locking pin can be inserted from either side of the Roof Rail.

Figure 2-10 Locking Pin Inserted

20. The Roof Module is now installed. See *Figure 2-11*.

Figure 2-11 Roof Module Installed

Massey Ferguson MF-8600 and AGCO DT-200B Installation Procedure

1. Locate the three hex screws on each side attaching the plastic maintenance cover on the cab roof right and left sides. See *Figure 2-12*.
2. Remove the three screws on each side for securing the two mounting brackets.

Figure 2-12 Mounting Bracket Bolt Locations

Note: The factory screws are threaded into metal inserts in the cab roof. If the threaded insert unscrews from the roof when you remove the original screw, you must re-install and bond it with epoxy adhesive on the insert's external threads before you can proceed with the installation. To re-install the threaded insert in the roof, temporarily thread an M8 screw with an M8 jam nut into the insert then turn the screw so that the insert rotates and threads flush into the roof. Release the jam nut while holding the screw head, then remove the screw from the insert. There is a kit provided M8 nut.

Note: To avoid possible damage, do not use conventional thread lockers such as Loctite on the plastic cab roof. Use only an Epoxy adhesive or a product recommended by your AGCO dealer.

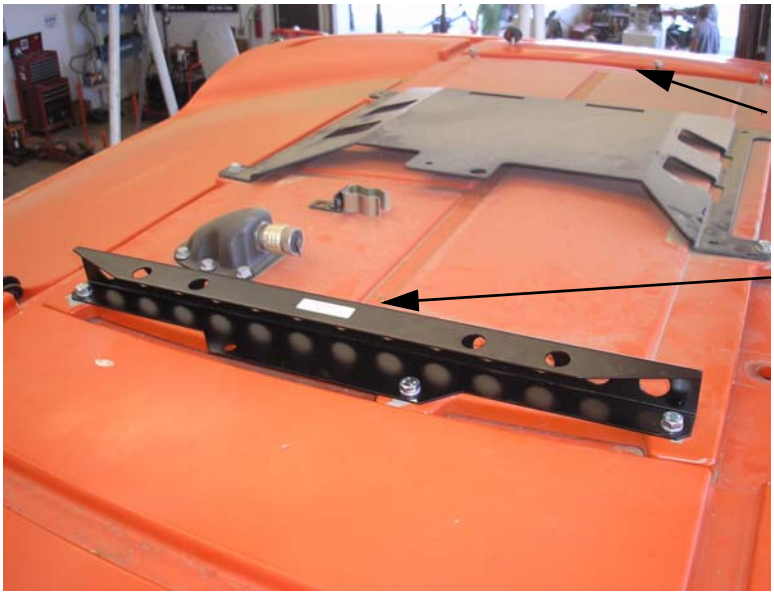
3. Install one bracket on each side aligning the bracket holes with the existing threads. See *Figure 2-13*.

Note: The right and left brackets are identical.

4. Secure each bracket with three kit provided longer hex screws and washers.

Note: Apply a small amount of grease to the screw threads before assembly to protect the threads.

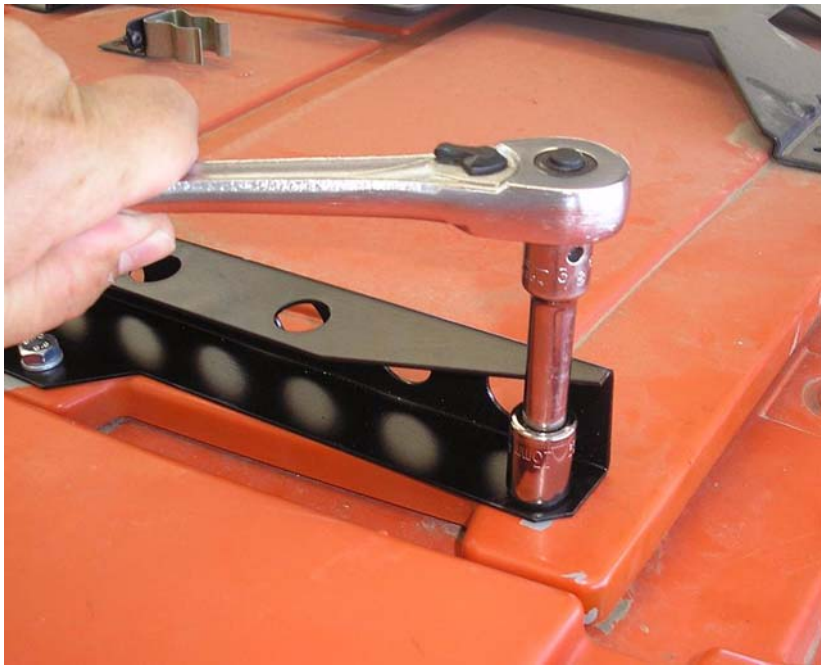
Figure 2-13 Roof Bracket Mounted



5. Tighten the bracket bolts using a 13mm socket wrench. See *Figure 2-14*.

Note: Do not over-tighten the bolts.

Figure 2-14 Tightening the Bracket Bolts



6. Install the Roof Rail over the rear bracket holes. See *Figure 2-15*.

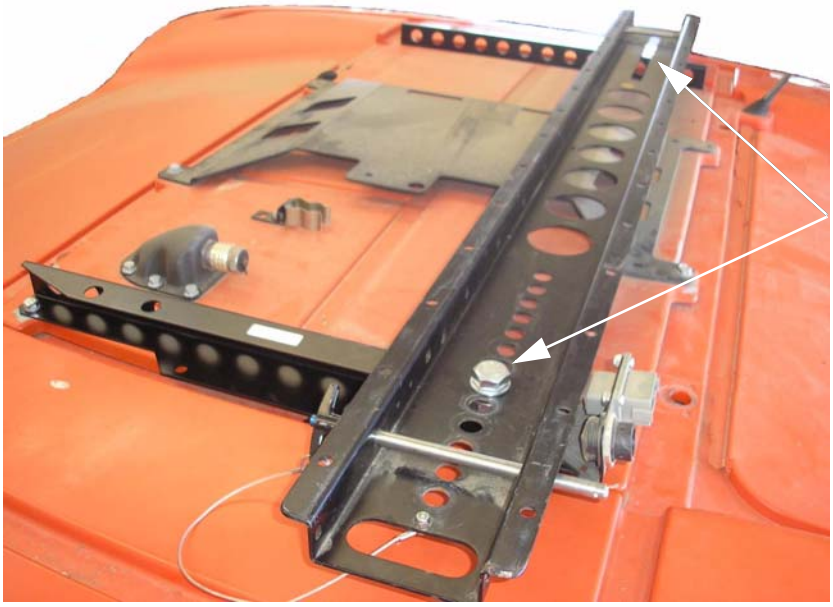
Note: Ensure the Roof Rail is aligned perpendicular to the roof. The Roof Rail quick release pin should be on the cab left side.

---

7. Center the Roof Rail over the roof using the hole number six for the left mounting bolt.

8. Secure the Roof Rail to the brackets on each cab side using the kit provided M16 hex bolt, two washers and locknut.

Figure 2-15 Roof Rail Mounted On Brackets



9. Attach the three antennas to the proper Roof Module connections. See *Figure 2-16*.

Note: Hand tighten the connections. Do not over tighten.

Figure 2-16 Antennas Attached to Roof Module

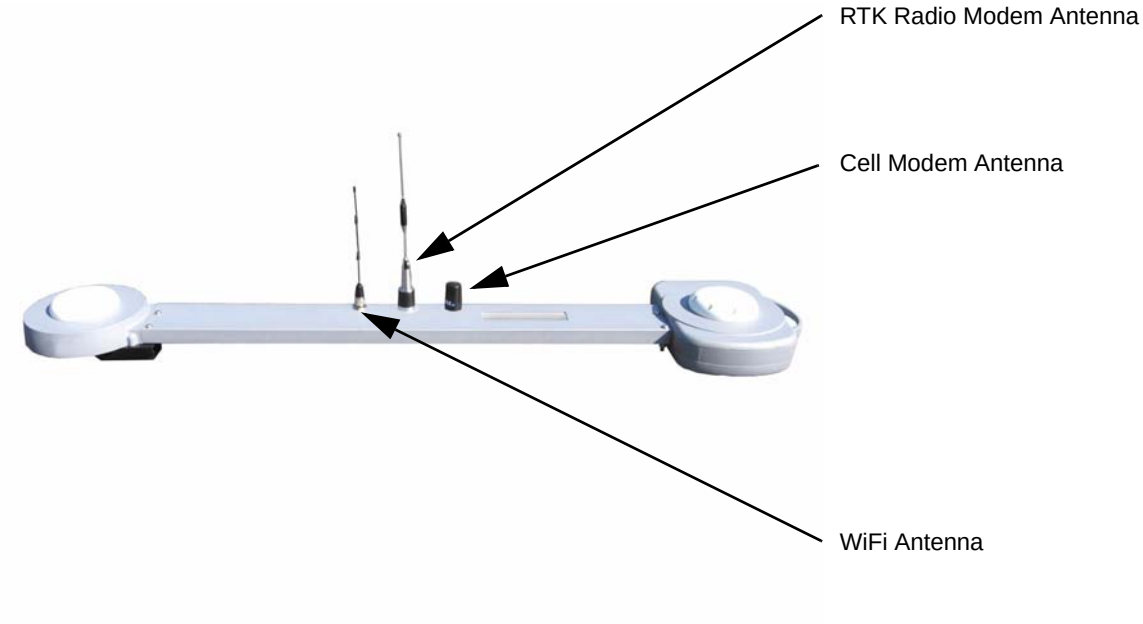


Figure 2-17 Remove Locking Pin

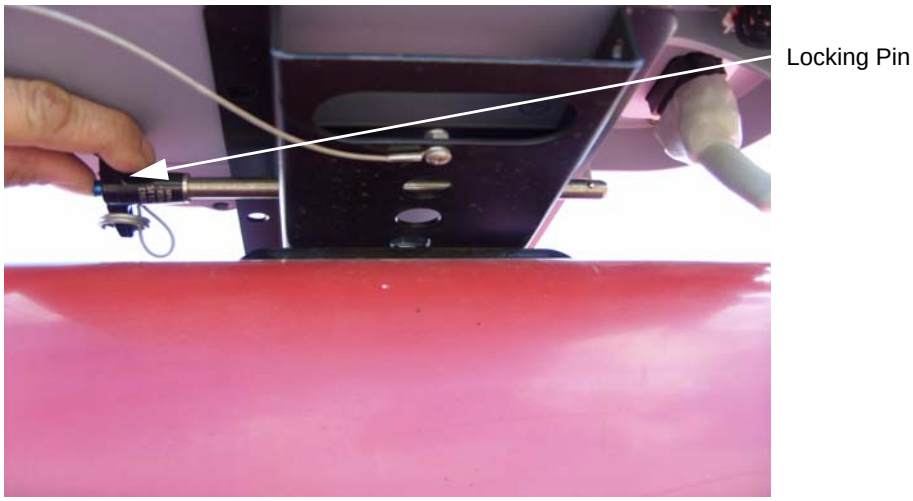
10. Place the Roof Module on the Roof Rail. See *Figure 2-18*.

Figure 2-18 Roof Module Mounted

11. Reinsert the Locking Pin into the Roof Rail. See *Figure 2-19*.

Note: The Roof Brackets and Roof Rail must be removed whenever the roof maintenance cover is opened for servicing the air conditioner. Re-install the Roof Rail following the correct installation procedure whenever the maintenance cover is removed for servicing the vehicle.

Figure 2-19 Reinsert Locking Pin



Note: The Locking Pin can be inserted from either Roof Rail side.

12. The Roof Module is now installed.

Display Installation

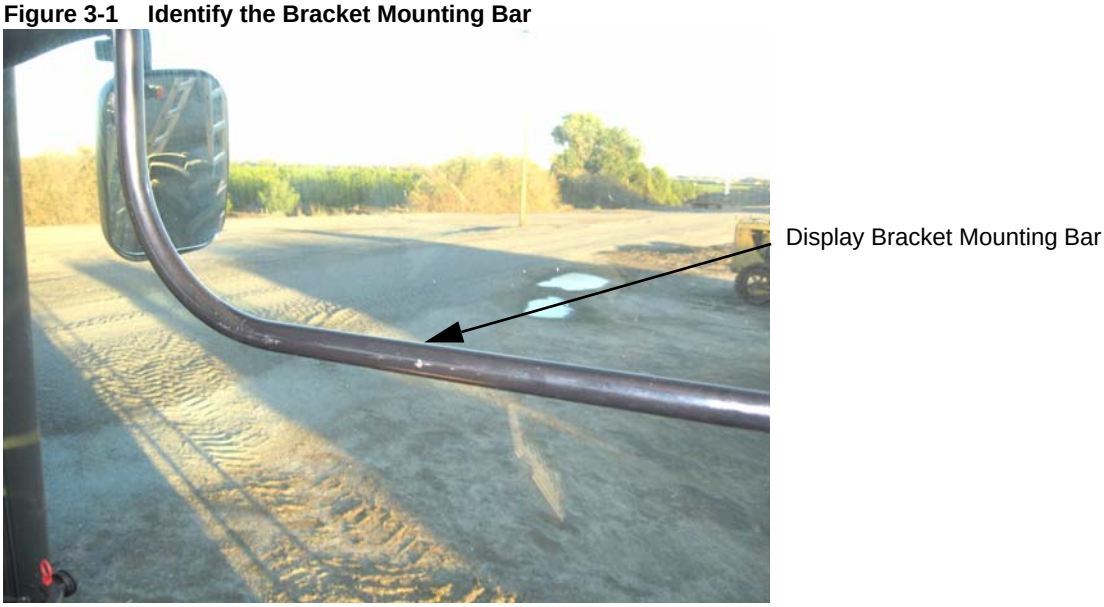
This **Display Installation** chapter contains information for mounting the system Display.

Note: This chapter provides instructions for installing the RAM mount ball in the cab. After the RAM mount is installed the Display can be attached. Refer to your Display User Manual for installation instructions.

---

1. Locate the identify the cab right side bracket mounting bar. See *Figure 3-1*.

Figure 3-1 Identify the Bracket Mounting Bar



2. Attach the RAM Mount Ball to the mounting bar with the two kit provided U-bolts and nuts.
3. Point the RAM Ball at an angle downward towards the seat. See *Figure 3-2*.
4. Tighten the bracket with a 1/2” wrench.
5. Install the four vinyl caps over the bolts.

Figure 3-2 Display Bracket Installed

Note: Refer to the Display user manual for the remaining Display specific installation instructions.

Connecting System Cables

This **Connecting System Cables** chapter contains information in the following sections:

- *Roof Module Connection*
- *Roof Module Serial Communication Connection*
- *Power Supply Connection*
  - *Cab Power Connection*
  - *Battery Power Connection*

Roof Module Connection

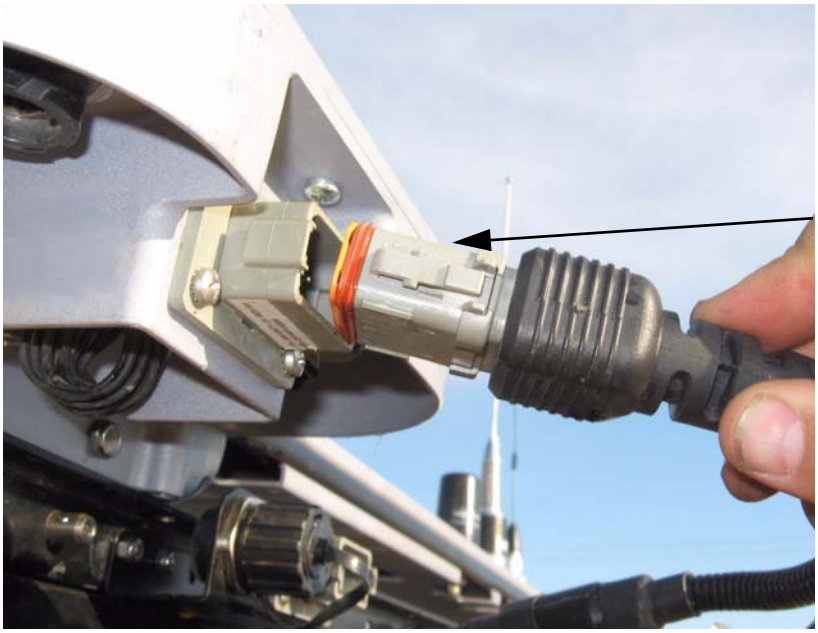
Note: Refer to the *Cable Diagram* on *page 6* and your Display user manual for information on cable connections.

Note: You can skip the Ethernet connection instructions if your Display requires a serial connection.

1. Connect the Main Harness from the Roof Module to the existing cab roof connector. See *Figure 4-2*.
2. Orient the 12-pin connector so the word TOP on the cable connector is pointing upwards (towards the sky). See *Figure 4-1*.
3. Insert the cable connector into the Roof Module. Push the connector in until it clicks and locks in place.

Note: To remove the connector, grasp the connector to compress the two side latches and then pull away from the Roof Module.

Figure 4-1 Connecting the Main Cable Harness to the Roof Module



4. Route the cable under the Roof Rail and secure with cable ties allowing sufficient length to make a wide loop. See *Figure 4-2*.

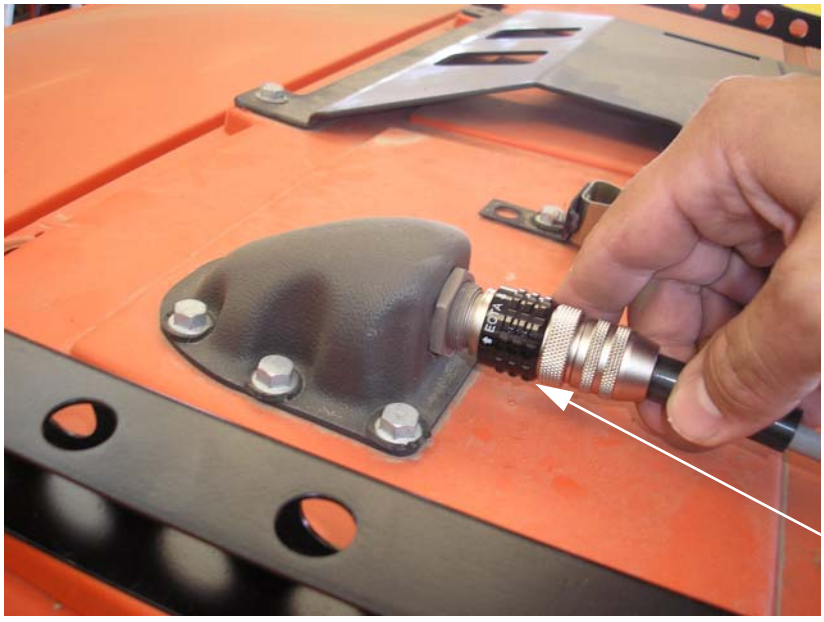
Figure 4-2 Roof Module Main Harness Connection

Note: You can skip the Ethernet connection instructions if your Display requires a serial connection. Proceed to the *Roof Module Serial Communication Connection* section on *page 32* if your installation requires a serial connection.

5. Connect the cable to the cab roof connector. See *Figure 4-3*.
6. Rotate the connector sleeve clockwise to engage and counterclockwise to disengage.
7. Store the original connector cap in the cab roof retaining bracket provided.

Note: Do not force the connector.

Figure 4-3 Cab Roof Connection



8. Orient the Ethernet cable connector with the connector under the receiver so the cable connector contacts are pointing towards the vehicle rear. See *Figure 4-4*.

Note: This orientation is usually towards your right side if you are standing on the vehicle left side and looking towards the Roof Module.

---

9. Slide the cable connector into the receiver and rotate the plastic bayonet sleeve clockwise to lock the connector. See *Figure 4-4*.

Figure 4-4 Roof Module Ethernet Connection

10. Route the Ethernet Cable along the back of the Roof Rail and secure with cable ties. See *Figure 4-5*.

Note: Do not attach the cable ties around the top or bottom parts of the Roof Rail bracket so the Roof Module can freely slide along the Roof Rail when it is installed and removed.

Figure 4-5 Route Cable to Right of Cab

11. Route the Ethernet cable down the cab rear and secure it with cable ties to the rear light and the two cab post brackets. See *Figure 4-6*.

Figure 4-6 Secure Cable to Rear Handle Bar

12. Route the Ethernet cable into the cab through the wire access port.

13. Secure the Ethernet cable with cable ties both inside and outside the cab.

14. If necessary, cut a slot in the rubber grommet. Replace the wire access rubber grommet allowing the Ethernet Cable to pass into the cab. See *Figure 4-7*.

15. Close the rear window.

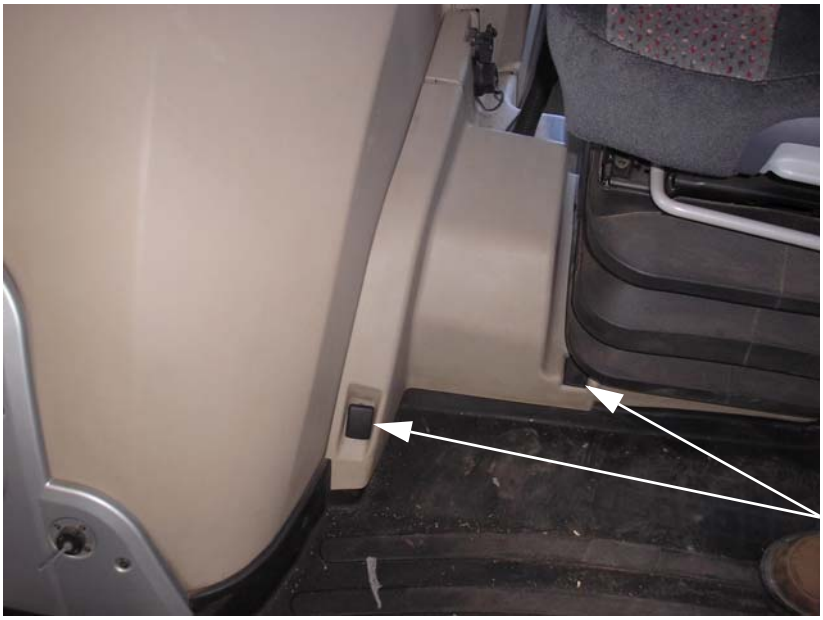
Figure 4-7 Route Harness into Cab

Roof Module Serial Communication Connection

Note: You may skip the serial connection instructions if your display uses a Roof Module Ethernet connection.

1. Identify the plastic cover near the driver seat right side floor.
2. Release the two latches and remove the cover by pulling it forward.

Figure 4-8 Access Cover



3. Remove the plastic cover just to the driver seat right to reach the vehicle serial connector. See *Figure 4-9*.

Figure 4-9 Serial Connector Access Cover Removed

4. Locate the DE9 serial connector. See *Figure 4-10*.

Note: This DE9 connector is the connection point for your Display harness. Use this serial connection when the Display user manual recommends a serial Roof Module connection.

Figure 4-10 Serial DE9 Connector

5. Connect the serial connector on your Display harness to the vehicle serial connector inside the cab. See *Figure 4-11*.

Note: Refer to the *Cable Diagram* on *page 6* for additional electrical connection information. The serial connector should remain under the plastic cover after the installation is completed.

Figure 4-11 Serial Connection

Power Supply Connection

The following sub-sections describe basic instructions for connecting the AutoSteer system to available vehicle power sources:

- *Cab Power Connection*
- *Battery Power Connection*

Note: Refer to your Display user manual for electrical connection information before attempting to connect the AutoSteer system to vehicle power. If your Display manual requires a cab power connection see the *Cab Power Connection* section, if your Display manual requires a direct battery connection see the *Battery Power Connection* section.

There are two issues that must be addressed when connecting to 12V vehicle power:

- Display Connection
- AutoSteer System Connection

The Display must be connected to 12V vehicle power according to the wiring diagram provided with your Display. The AutoSteer system Main Cable Harness must be connected to a 3-pin 12V power connector. Your Display user manual provides a wiring diagram for connecting the AutoSteer system to 12V Power.

Your Display user manual may specify using a cab 12V power outlet or may require a direct connection to the vehicle battery. Your Display wiring diagram specifies the recommended vehicle 12V power source. Whether your Display harness connects to the vehicle battery or to the 12V power outlet inside the cab, it is shipped with the appropriate harness for your installation.

Note: In this installation the Roof Module is connected to the vehicle 12V power through the roof connector and does not require a separate power connection.

Cab Power Connection

1. Locate the cab console right-side 12V power outlet. See *Figure 4-12*.
2. Use this 12V accessory power connector if the display manual specifies connecting to power inside the cab.

Figure 4-12 Cab 12V Power Outlet

Battery Power Connection

1. Locate the vehicle battery. See *Figure 4-13*.
2. Connect to the vehicle battery if the display manual specifies a direct battery connection.

Figure 4-13 Vehicle Battery Location

3. Using the ignition key, unlock the battery box and open the lid. The batteries are shown in *Figure 4-14*.

Figure 4-14 Vehicle Batteries

Note: A battery cable is provided with the AutoSteer system when a direct battery connection is required.

Post-Installation Procedures and Information

This **Installation Completion Procedures** chapter contains information on procedures and processes that should be performed after the installation process is complete. The information for this chapter is contained in the following sections:

- *Create a New Vehicle*
- *Verify the Vehicle is Ready for AutoSteer*
- *Calibration and Tuning Notes*
  - *Vehicle Specific Installation Calibration and Tuning Guidelines*

Create a New Vehicle

After the entire system has been installed, including the Display and Roof Module, the operator must create a new vehicle profile using the AutoSteer system. The vehicle profile configures the hardware and enables the display to communicate with the various sensors and vehicle components.

Follow the procedure below to create a new vehicle:

1. Ensure the vehicle is still in Park and/or the park brake is set to prevent the vehicle from moving.
2. Ensure the vehicle is off. Do not start the vehicle yet.
3. Power up the AutoSteer system
4. Follow the instructions provided in the Display User Manual to create a new vehicle.

Verify the Vehicle is Ready for AutoSteer

1. A three-position console switch turns the Roof Module power on and off and the Steering Valve on and off. See *Figure 5-1*.

Figure 5-1 Console Switch

2. The Console Switch position functions are as follows:
   a. The OFF position shuts down power to the GPS Roof Module and Steering Valve and is the recommended position when you are not using your ParaDyme system.
   b. The middle antenna position turns on only the GPS Roof Module power.
   c. The steering wheel position turns on power to both the GPS Roof Module and Steering Valve and is the recommended position for normal AutoSteer operations.
3. Refer to your vehicle owners manual for recommended switch operation.

Note: Always shut down your ParaDyme system and put the switch in the OFF position when driving on public roads and when the tractor is not being used. Failure to put the switch in the OFF position keeps the Roof Module powered up and discharges the battery over an extended time period. Simply turning off the AutoSteer display does not turn off the Roof Module.

Note: Always turn off your AutoSteer display and Roof Module before starting the engine. Only turn on your display and roof module after the engine is running.

4. Verify the vehicle is responding to AutoSteer commands by going to the Steering Components screen and then the Valve screen where you can manually command the wheels to turn right and left.

Note: Refer to your ParaDyme User manual for more details.

Note: If the tractor does not respond to the AutoSteer system and the front wheel do not turn, check all your cable connections then confirm that the tractor is fully factory configured for AutoGuide^2 with the correct software and hardware. Contact your AGCO dealer for AutoGuide^2 support and he has the appropriate tools to update the vehicle software and calibrate the factory system if necessary.

Calibration and Tuning Notes

Vehicle Specific Installation Calibration and Tuning Guidelines

Note: For optimal AutoSteer performance, the AutoSteer system must be fully calibrated and then tuned.

Note: Select the appropriate Challenger MT vehicle model when setting up your vehicle on the AutoSteer system display.

Final Hardware Installation Checklist

This **Final Hardware Installation Checklist** chapter contains the verifications steps necessary after AutoSteer system installation.

Note: The Final Hardware Installation Checklist is on the back of this page. Fill in the checklist after the installation. You should keep a copy of this checklist for future reference when servicing the AutoSteer system.

Machine Model: _____ Year: _____ Serial #: _____

Customer Name: _____

Location/Address: _____

AutoSteer Installation Kit Part Number: _____

NOTES

_____

_____

_____

_____

_____

_____

Name of Installer: _____ Date: _____

System Installation Checklist

1. Monitor Bracket Installed and all fasteners are tight. ☐
2. Roof Rail and Roof Module are installed and all fasteners are tight. ☐
3. All cable ends are connected. ☐
4. All cables are secured with cable ties. ☐
5. Vehicle is fully configured for AutoGuide^2 with correct firmware version. ☐

AutoSteer Performance Checklist

1. Complete AutoSteer system calibration. ☐
2. Complete AutoSteer system tuning. ☐
3. Verify that line acquisition is good. ☐
4. On-line steering is good. ☐
5. Manual override (kick-out) is working. ☐
6. Steering speed from lock-to-lock is satisfactory. ☐ Value_____Sec.